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Title:
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       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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ALIGNMENTS

#text_change

20-Jun-2000

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A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-351 <WIL>
A;Cross-references: EMBL:Z81554; PIDN:CAB04503.1; GSPDB:GN00023; CESP:F57G4.4
A;Experimental source: clone F57G4
                                                                                                                                                                                                                                                                                               hypothetical protein F57G4.4 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 15-Oct.1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999 C;Accession: T22861
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A;Molecule type: DNA
A;Residues: 1-335 <KAW>
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C;Accession: H75029
C;Annonymous, Genoscope
submitted to the EMBL Data Library, July 1999
A;Description: Pyrococcus abyssi genome sequence:
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submitted to the EMBL Data Library,
A;Reference number: Z19629
A;Accession: T22861
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Reference number: A75001
A; Accession: H75029
                                                                      A; Map position: 5
A; Introns: 65/2;
                                                                                                        A; Gene: CESP:F57G4.4
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                     Query Match
Best Local (
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100.0%; O;
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0; Mismatches
     Score 8; DB; Pred. No. 3. 0; Mismatches
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C;Accession: T38482
R;Brown, D.; Churcher, C.M.; Wood, V.; Barrell, submitted to the EMBL Data Library, June 1997
A;Reference number: Z21796
A;Accession: T38482
                                                                                                         hypothetical protein SPAC29A4.07 - fission yeast (:
C:Species: Schizosaccharomyces pombe
C:Date: 03-Dec-1999 #sequence_revision 03-Dec-1999
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I51064
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A:Title: Genome Sequence and Comparative Analysis of the A:Reference number: A96900; MUID:21359325; PMID:21359325, A:Accession: E97011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C:Species: Clostridium acetobuty11cum
C:Date: 14-Sep-2001 #sequence_revision 14-Sep-2001 #text_change 30-Sep-2001
C:Accession: E97011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Moore, C.A.; Kittilson, J.D.; Dahl, S.K.; Sheridan, M.A. Gen. Comp. Endocrinol. 98, 253-261, 1995
A;Title: Isolation and characterization of a cDNA encoding A;Reference number: IS1064; MUID:95354921; PMID:7628684
A;Accession: IS1064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      somatostatin II precursor - rainbow trout
C;Species: Oncorhynchus mykiss (rainbow trout)
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change
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C;Superfamily: endopeptidase Clp ATP-binding chain
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ATPase with chaperon activity, two ATP-binding domains, ClpC orthologs CAC0904 [imported C; Species: Clostridium acetobutylicum
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A;Experimental source: Clostridium acetobutylicum ATCC824
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A; Residues: 1-752 < KUR>
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A; Status: preliminary; translated from GB/EMBL/DDBJ
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A; Molecule type: protein
A; Molecule type: protein
A; Residues: 17-46 <HOK>
A; Residues: 17-46 <HOK>
C; Comment: This protein is used to stabilize the displaced single strand of of C; Superfamily: single-stranded DNA-binding protein; single-stranded DNA-binding C; Keywords: DNA binding; DNA replication; mitochondrion
C; Keywords: DNA binding; DNA replication; mitochondrion
F; 1-16/Domain: transit peptide (mitochondrion) #status predicted <SIG>
F; 17-148/Product: single-stranded mitochondrial DNA-binding protein #status predicted single-stranded DNA-binding protein homology <SSD>
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                                                                                                  A;Description: The sequence of A;Reference number: Z21105 A;Accession: T31967
                                                                                                                                               submitted to the EMBL Data Library, July 1 A:Description: The sequence of C. elegans
                                                                                                                                                                                                                                  hypothetical protein C33C12.2 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #te
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A;Title: Structural and functional studies of the rat mitochondrial single A;Reference number: S13264; MUID:91024186; PMID:2221914
A;Accession: S13264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gene 126, 219-225, 1993
A;TitLe: Cloning of human and rat cDNAs encoding the mitochondrial single-stranded A;Reference number: JN0568; MUID:93246247; PMID:8482537
A;Accession: JN0569
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A;Gene: SPDB:SPAC29A4.07
A;Map position: 1
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A; Residues: 1-136 < A; Cross-references:
                                                                                                                                                                                            R; Gattung,
A;Cross-references: EMBL:AF016662; PIDN:AAB66062.1; GSPDB:GN00020; CESP:C33C12.2
A;Experimental source: strain Bristol N2; clone C33C12
                                        A; Molecule type: DNA
A; Residues: 1-170 <GAT>
                                                                                A; Status: preliminary; translated
                                                                                                                                                                                                                C; Accession: T31967
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A; Residues: 1-151 <TIR>
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7; Conservative
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R;Chambaud, I.; Heilig, R.; Ferris, S.; Barbe, V.; Samson, D.; Galisson, F.; Moszer, I.; Nucleic Acids Res. 29, 2145-2153, 2001
A;Title: The complete genome sequence of the murine respiratory pathogen Mycoplasma pulm A;Reference number: A99512; MUID:21267165; PMID:11353084
A;Accession: D90569
                                                                                                                                                                                                                                                   D.; Jones, L.M.; Karst, U.
Science 294, 849-852, 2001
A;Authors: Kreft, J.; Kuhn, M.; Kunst, F.; Kurapkat, G.; Madueno, E.;
ok, C.; Schlueter, T.; Simoes, N.; Tierrez, A.; Vazquez-Boland, J.A.;
A;Title: Comparative genomics of Listeria species.
A;Reference number: AB1077; MUID:21537279; PMID:11679669
A;Accession: AB1527
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-202 <GLA>
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AB1527
AB1527
Appothetical protein lin0754 [imported] - Listeria innocua (strain Clip11262)
C;Species: Listeria innocua
C;Species: 27-Nov-2001 #sequence_revision 27-Nov-2001 #text_change 27-Nov-2001
C;Accession: AB1527
                                                                                                                                                                       A; Experimental source: C; Genetics: A; Gene: lin0754
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A; Residues: 1-180 < KUR>
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A;Gene: CESP:C33C12.2
A;Map position: 2
A;Introns: 69/3; 113/2
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A;Experimental source: strain Clip11262
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A;Genetic code: SGC3
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Fsihi, H.
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hypothetical protein MJ0042 - Methanococcus jannaschii C;Species: Methanococcus jannaschii C;Species: Methanococcus jannaschii C;Species: Methanococcus jannaschii C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 22-Oct-1999 C;Accession: B64305 R;Bull, C.J.; White, O; Olsen, G.J.; Zhou, L.; Fleischmann, R.D.; Sutton, G.G.; Blal R;Bull, C.J.; Worrbeek, R.; Kirkness, E.F.; Weinstock, K.G.; Merrick, J.M.; Glodek, rson, J.D.; Sadow, P.W.; Hanna, M.C.; Cotton, M.D.; Roberts, K.M.; Hurst, M.A. Science 273, 1058-1073, 1996 A;Authors: Kaine, B.P.; Borodovsky, M.; Klenk, H.P.; Fraser, C.M.; Smith, H.O.; Woese A;Title: Complete genome sequence of the methanogenic archaeon, Methanococcus jannasc
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ok, C.; Schlueter, T.; Simoes, N.; Tierrez, A.; Vazquez-
A;Title: Comparative genomics of Listeria species.
A;Reference number: AB1077; MUID:21537279; PMID:11679669
A;Accession: AH1169
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                                                                                                                             A; Molecule type: DNA
A; Residues: 1-214 <IMM>
A; Cross-references: EMBL:Z29363; NID:g575300; PIDN:CAA82549.1;
C; Superfamily: Lactococcus lactis probable permease nisG
                                                                                                                                                                                                                                                                                                                                probable permease nisG - Lactococcus lactis
C;Species: Lactococcus lactis
C;Date: 05-Mar-1995 #sequence_revision 12-May-1995
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A; Authors: Kreft, J.; Kuhn, M.; Kunst, F.;
                                                                                                                                                                                A; Reference number: S4
A; Accession: S49599
A; Status: preliminary
A; Molecule type: DNA
                                                                                                                                                                                                                                                                   submitted to the EMBL Data Library, *** region in
                                                                                                                                                                                                                                                                                                    C; Accession: S49599 R; Immonen, T.; Paul
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A; Residues: 1-202 <GLA>
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R;Glaser, P.; Frangeul, L.;
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                             22
                             FLLFFPS 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                            HDGSLDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity 7; Conserv
                                                               Similarity 7; Conser
                                                                                                                                                                                                                                                                                                      Paulin, L.; Saris,
                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                            89
                                                                                                                                                                                                                                   S49597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3.7%; 5cc
100.0%; Pr
                                                        3.7%; 50
100.0%; Pr
0;
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chaud, E.; Durand, L.; Dussurget, O.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 7; DB 2; Pred. No. 25; 0; Mismatches
                                                                                                                                                                                                                                                                                                    ۳.
                                                                                                Score 7;
                                                               Pred. No. 27 
; Mismatches
                                                                                                                                                                                                                                                                   January 1994
the conjugative
                                                                        DB
. 27;
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, A.; Vazquez-Boland, J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2
                                                                 0,
                                                                                                                                                                                                                                                                                                                                       #text_change 15-Oct-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 202;
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                                                                                               Length 214
                                                                                                                                                                                                                                                                    nisin-sucrose
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                                                                                                                                                  PID:g575303
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  О, Е.;
J.A.;
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Lian, K.D.;
                                                                 Gaps
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Voss, H.; W
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Fsihi,
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Wehla
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jannasc

Woese

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C; Keywords: ATP; F; 26-222/Domain: F; 43-50/Region:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    G:Species: Anabaena sp.
C:Species: Anabaena sp.
C:Date: 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change 02-Fe
C:Accession: A5541; S38423
R:Maldener, I.; Fiedler, G.; Ernst, A.; Fernandez-Pinas, F.; Wolk, C.
J. Bacteriol. 176, 7543-7549, 1994
J. Bacteriol. 176, 7543-7549, 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C; Gene
A; Map
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Species: Methanococcus jannaschii
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 21-Jul-2000
C;Accession: D64498
R;Bult, C.J.; White, O.; Olsen, G.J.; Zhou, L.; Fleischmann, R.D.; Sutton, G.G.; Blal; Reich, C.I.; Overbeek, R.; Kirkness, E.F.; Weinstock, K.G.; Merrick, J.M.; Glodek, Reich, C.I.; Overbeek, R.; Kirkness, E.F.; Weinstock, K.G.; Merrick, J.M.; Glodek, R.; Reich, C.I.; Overbeek, R.; Kirkness, E.F.; Weinstock, K.G.; Merrick, J.M.; Glodek, R.; Reich, C.I.; Overbeek, R.; Kirkness, E.F.; Weinstock, K.G.; Merrick, J.M.; Glodek, R.; Reich, C.I.; Overbeek, R.; Kirkness, E.F.; Weinstock, K.G.; Merrick, J.M.; Glodek, R.; Reich, C.I.; Overbeek, R.; Kirkness, E.F.; Weinstock, K.G.; Merrick, J.M.; Glodek, R.; Reich, C.I.; Overbeek, R.; Kirkness, E.F.; Weinstock, R.G.; Merrick, J.M.; Glodek, R.; Reich, C.I.; Overbeek, R.; Kirkness, E.F.; Weinstock, R.G.; Merrick, J.M.; Glodek, R.; Reich, C.I.; Overbeek, R.; Kirkness, E.F.; Weinstock, R.G.; Merrick, J.M.; Glodek, R.; Reich, C.I.; Overbeek, R.; Kirkness, E.F.; Weinstock, R.G.; Merrick, J.M.; Glodek, R.; Reich, C.I.; Overbeek, R.; Kirkness, E.F.; Weinstock, R.G.; Merrick, J.M.; Glodek, R.; R.; Rickness, R.; R.; Rickness, R.
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A;Accession: B64305
A;Status: preliminary; nucleic
A;Molecule type: DNA
A;Residues: 1-215 <BUL>
                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: Characterization of devA, a gene required for the maturation of proheterocysts A;Reference number: A55541; MUID:95095923; PMID:8002578 A;Accession: A55541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Reference number: A64300; A; Accession: D64498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rson, J.D.; Sadow, P.W.; Hanna, M.C.; Cotton, M.D.; Roberts, K.M.; Science 273, 1058-1073, 1996
A; Authors: Kaine, B.P.; Borodovsky, M.; Klenk, H.P.; Fraser, C.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: GB:U67462; C;Genetics:
                                                                                                                                                                                                                                 A;Gene: devA
C;Superfamil
                                                                                                                                                                                                                                                                                          C; Genetics:
                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: DNA
A; Residues: 1-244 <MAL>
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A; Residues: 1-241 <BUL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Title: Complete genome sequence of the methanogenic archaeon, A; Reference number: A64300; MUID:96337999; PMID:8688087
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                                                                                                                                                                                                                                                                                                                     A;Cross-references: EMBL:X75422; NID:g407772;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        heterocyst maturation protein devA - Anabaena sp.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
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Best Local S
Matches 7
                                                                                                                                       ;superfamily: short-chain ATP-binding cassette proteins;
;Keywords: ATP; nucleotide binding; P-loop
;26-222/Domain: ATP-binding cassette homology <ABC>
;43-50/Region: nucleotide-binding motif A (P-loop)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genetics
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           168 VLIITYL 174
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    198 LIEKLIK 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity nes 7; Conserv
                                                         Local
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                           Similarity
7; Conserv
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                                                         100.0%;
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                                                                                          3.78;
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                           0;
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Pred. No.
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Pred. No.
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                              Mismatches
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27;
                                                      DB 2
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                                                                                                                                                                                                                                                                                                                     PIDN:CAA53174.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241;
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                                                                                                                                                                                                                                                                                                                  PID:g407773
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                           0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Blake,
dek, A.
                                                   translation initiation factor IF-2, chloroplast -
C;Species: chloroplast Cyanidium caldarium
C;Date: 06-Jan-1995 #sequence_revision 24-Oct-1997
C;Accession: S36410; S70822
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submitted to
                           R; Kostrzewa,
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A; Science, repe: DNA
A; Molecule type: DNA
A; Residues: 1-244 <KUR>
A; Cross-references: GB:BA000019; PIDN:BAB75411.1;
A; Cross-reference: Strain PCC 7120
                                                                                                                                                                                                                                                                                                                                                 C;Date: 24-May-2001 #sequence_revision 24-May-2001 #text_change
C:Accession: A90527
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C;Superfamily: short-chain ATP-binding cassette proteins; ATP-binding
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DNA Res. 8, 205-213, 2001
A; Title: Complete Genomic
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C; Accession: AIZ269
                                                                                                                               A; Genetic code:
                                                                                                                                                                             A;Cross-references: GB:AL445566; PID:g14089534; PIDN:CAC13294.1; A;Experimental source: strain UAB CTIP
                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-245 < KUR>
                                                                                                                                                                                                                                                                                                      R;Chambaud, I.; Heilig, R.; Ferris, S.; Barbe, V.; Samson, Nucleic Acids Res. 29, 2145-2153, 2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R;Kaneko, T.; Nakamura, Y.; Wolk, C.P.; Kuritz, T.; Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, I
                                                                                                                                                                                                                                                            A; Reference number: A; Accession: A90527
                                                                                                                                                                                                                                                                                            A; Title: The complete
                                                                                                                                                                                                                                                                                                                                          C; Accession:
                                                                                                                                                                                                                                           A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                          hypothetical protein MYPU_1210 [imported] - Mycoplasma pulmonis
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Best Local
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223
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ic code: SGC3
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 TLIVLII 229
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ilarity 100.0%;
Conservative
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                                                                                                                                                                                                                                                                           te genome sequence of the murine respiratory A99512; MUID:21267165; PMID:11353084
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M.; Yamada,
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30-Jun-2002
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Zetsche,

Data Library,

June 1992

ldarium ion 24-Oct-1997

#text_change

red alga (Cyanidium caldarium)

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R;Klenk, H.P.; Clayton, R.A.; Tomb, J.F.; White, O.; Nelson, K.E.; Ketchum, K.A.; Dodson; Fleischmann, R.D.; Quackenbush, J.; Lee, N.H.; Sutton, G.G.; Gill, S.; Kirkness, E.F.; Glodek, A.; Zhou, L.; Overbeek, R.; Gocayne, J.D.; Weidman, J.F.; McDonald, L. Nature 390, 364-370, 1997

A;Authors: Utterback, T.; Cotton, M.D.; Spriggs, T.; Artiach, P.; Kaine, B.P.; Sykes, S. A;Itle: The complete genome sequence of the hyperthermophilic, sulfate-reducing archaed A;Reference number: A69250; MUID:98049343; PMID:9389475

A;Status: preliminary; nucleic acid sequence not shown; translation not shown A;Molecule type: DNA
A;Residues: 1-324 <KLE>
A;Cross-references: GB:AE001084; GB:AE000782; NID:92689407; PIDN:AAB90929.1; PID:9265033
C;Superfamily: GDPmannose dehydrogenase
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hypothetical protein Y94A7B.5 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #te: C;Accession: T27484 R;Kershaw, J. submitted to the EMBL Data Library, June 1998 A;Accession: T27484 A;Accession: T27484
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R;Klenk, H.P.; Clayton, R.A.; Tomb, J.F.; White, O.; Nelson, K.E.; Ketchum,
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A;Accession: S70822
A;Molecule type: DNA
A;Residues: 88-259 <KOF>
A;Cross-references: EMBL:x66698
A;Experimental source: Strain 14-1-1
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A; Accession: $36410
A; Accession: $36410
A; Molecule type: DNA
A; Residues: 1-259 < KOS>
A; Cross-references: EMBL: X66698; NID: g396522; PID: g396523
A; Experimental source: strain 14-1-1
R; Kostrzewa, M.; Zetsche, K.
Plant Mol. Biol. 23, 67-76, 1993
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                     A; Accession: H65219
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A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-327 <MIL>
A; Cross-references: EMBL:AL023856; PIDN:CAA19567.1; GS
A; Experimental source: clone Y94A7B
C; Genetics:
A; Gene: CESP:Y94A7B.5
A; Map position: 5
A; Introns: 104/1; 245/3
C; Superfamily: Caenorhabditis hypothetical protein C44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nature 390, 580-586, 1997
A; Authors: Smith, H.O.; Venter, J.C.
A; Title: Genomic sequence of a Lyme disease spirochaete, A; Reference number: A70100; MUID:98065943; PMID:9403685
A; Accession: B70177
A;Cross-references: EMBL:U14003; NID:g1263172; PIDN:AAA97004.1; PID:g536949
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, August 1994
R;Blattner, F.R.; Plunkett III, G.; Bloch, C.A.; Perna, N.T.; Burland, V.; Riley, M.
A.; Rose, D.J.; Mau, B.; Shao, Y.
Science 277, 1453-1462, 1997
A;Title: The complete genome sequence of Escherichia coli K-12.
A;Reference number: A64720; MUID:97426617; PMID:9278503
                                                                                                                                                                                                                                                                                                    C;Species: Escherichia coli

C;Date: 28-Oct-1995 #sequence_revision 03-Nov-1995 #text_change 01-Mar-2002
C;Date: 28-Oct-1995 #sequence_revision 03-Nov-1995 #text_change 01-Mar-2002
C;Accession: S56333; H65219; E35718
R;Burland, V.; Plunkett III, G.; Sofia, H.J.; Daniels, D.L.; Blattner, F.R.
Nucleic Acids Res. 23, 2105-2119, 1995
Nucleic Acids Res. 23, 2105-2119, 1995
A;Title: Analysis of the Escherichia coli genome VI: DNA sequence of the res.
A;Teference number: S56314; MUID:95334362; PMID:7610040
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C;Species: Borrelia burgdorferi (Lyme disease spirochete)
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 21-Jul-2000
C;Accession: B70175
C;Accession: B70175
R;Fraser, C.M.; Casjens, S.; Huang, W.M.; Sutton, G.G.; Clayton, R.; Lathigra, son, D.; Peterson, J.; Kerlavage, A.R.; Quackenbush, J.; Salzberg, S.; Hanson, Bowman, C.; Garland, S.; Fujli, C.; Cotton, M.D.; Horst, K.; Roberts, K.; Hat
                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-338 <BUR>
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A; Residues: 1-330 <KLE>
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ion, M.;
Hatch,
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sequence not shown;

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iller, L.; Grotbeck, E.J.; Davis, N.W.; Lim, A.; Dimalanta, Nature 409, 529-533, 2001
A;Title: Genome
                                                                                                                                                                                                                                                                                                                                                                                                hypothetical protein phnD [imported] - Escherichia coli (strain 0157:H7, su C;Speciles: Escherichia coli (strain 0157:H7, su C;Speciles: Escherichia coli (strain 0157:H7, su C;Speciles: Bscherichia coli (strain 0157:H7, su C;Speciles
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D86105
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A; Residues: 1-338 <BLAT>
A; Residues: 1-338 <BLAT>
A; Residues: 338 <BLAT>
A; Cross references: GB.AE000482; GB:U00096; NID:92367349; PIDN:AAC77066.1;
A; Experimental source: strain K-12, substrain MG1655
R; Chen, C.M.; Ye, Q.Z.; Zhu, Z.; Wanner, B.L.; Walsh, C.T.
J. Biol. Chem. 265, 4461-4471, 1990
A; Title: Molecular biology of carbon-phosphorus bond cleavage. Cloning and A; Reference number: A35718; MUID:90170953; PMID:2155230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gasawara, N.; Yasunaga, T.; Kuhara, S.; Shiba, T.; Hattori, M.; Shinagawa, H. DNA Res. 8, 11-22, 2001
A;Title: Complete genome sequence of enterohemorrhagic Escherichia coli O157:H7
A;Reference number: A99629; MUID:21156231; PMID:11258796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hypothetical protein ECs5087 [imported] - Escherichia coli (strain 0157:H7, C;Species: Escherichia coli (C;Deccies: B-Jul-2001 #sequence_revision 18-Jul-2001 #text_change 18-Jul-2001 C;Accession: G91264
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A; Residues: 1-311,'A',313-338
A; Cross-references: GB:J05260;
                                                             A; Experimental source: C; Genetics:
                                                                                        A;Cross-references: GB:AE005174; NID:g12519072; pIDN:AAG59304.1; GSPDB:GN00145; UWGP:Z5A;Experimental source: strain 0157:H7, substrain EDL933
                                                                                                                                                  A; Molecule type: DNA
A; Residues: 1-338 <STO>
                                                                                                                                                                                                                                                                              A; Title: Genome sequence of enterohemorrhagic Escherichia A; Reference number: A85480; MUID:21074935; PMID:11206551
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A; Residues: 1-338 <H
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Best Local :
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Kasunaga, T.; Kuhara,
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Shiba, T.;
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39;
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; Hattori, 
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Lanta, E.;
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M.; Shinagawa,
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K.; A
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A; Note: ND5
C; Superfamil
C; Keywords:
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Gene 203,
20
                                                                                                                                                                              A;Molecule type: DNA
A;Residues: 1-122,'L',124-355 <IM2>
A;Cross-references: EMBL:AB017473; PIDN:BAA33189.1
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R; Imura, Y.; Su, Z.H.; K
Elytra 26, 223-248, 1998
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C;Species: Streptomyces hygroscopicus
C;Date: 24-Mar-1999 #sequence_revision 24-Mar-1999 #text_change 22-Oct-1999
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A;Experimental source: isolate High tatras Slovakia; adult; thorax muscle
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A; Residues: 1-355 < IMU>
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C;Accession: T12104; T12106
                                                                                                                                                                                                                                                                                                                                                                                                                                     NADH2 dehydrogenase (ubiquinone) (EC 1.6.5.3) chain 5
C:Species: mitochondrion Carabus linnei
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A;Experimental source:
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                                                                                                                                                                                                                                                                                                                A; Status: preliminary; translated from GB/EMBL/DDB
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nes 7; Conserv
 20 FIFLLFF 26
                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        X.; Stassi, D.; Lax, S.; Katz, L. 
3, 1-9, 1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           54 LODMEKK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 NPSSLVL 8
                                                                                                                                      mitochondrion
                               Similarity
7; Conserv
                                                                                         membrane-associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity 7; Conserv
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ce: ATCC 29253
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                                                Pred.
                                Mismatches
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                                                                                                                                                                   Slovakia; adult;
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                                              No.
                                                                                            mitochondrion;
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40;
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39;
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157 FIFLLEF 163

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NADH2 dehydrogenase (ubiquinone) (EC 1.6.5.3) chain 5 (isolate Mt. Khumaratkhok C;Species: mitochondrion Carabus cribratus C;Date: 05-Nov-1999 #sequence_revision 05-Nov-1999 #text_change 03-Jun-2002 C;Accession: T12032 C;Accession: T12032 R;Imura, Y.; Su, Z.H.; Kim, C.G.; Osawa, S. Rimura, Y.; Su, Z.H.; Kim, C.G.; Osawa, S. Rimura, Y.; Su, Z.H.; Kim, C.G.; Osawa, S. Rimura, Y.; Su, Z.H.; Kim, C.G.; Osawa, S. R;Imura, Y.; Su, Z.H.; Kim, C.G.; Osawa, S. R;Imura, Y.; Su, Z.H.; Kim, C.G.; Osawa, S. R;Reference number: 217381 A;Reference number: 217381 A;Reference number: 217381 A;Reference number: 217381 A;Roccession: T12032 A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: DNA A;Residues: 1-355 <IMUV A;Cross-references: EMBL:AB017461; PIDN:BAA33177.1 A;Experimental source: isolate Mt. Khumaratkhok Russia; adult; thorax muscle C;Genetics: A;Geneme: mitochondrion A;Note: ND5 C;Superfamily: NADH dehydrogenase (ubiquinone) chain 5 C;Superfamily: NADH dehydrogenase (ubiquinone) chain 5 C;Keywords: membrane-associated complex; mitochondrion; NAD; oxidative phosphory
R;Su, Z.H.; Tominaga, O.; Okamoto, M.; Osawa, S.
Mol. Biol. Evol. 15, 1026-1039, 1998
A;Title: Origin and diversification of hindwingless Damaster A; Reference number: Z17319; MUID:98384842; PMID:9718730
A; Accession: T13831
A; Status: preliminary: +-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Su, Z.H.; Tominaga, O.; Okamoto, M.; Osawa, S.
Mol. Biol. Evol. 15, 1026-1039, 1998
A;Title: Origin and diversification of hindwingless Damaster ground beetles within A;Reference number: Z17319; MUID:98384842; PMID:9718730
A;Recession: T13830
A;Residues: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DMA
A;Residues: 1-355 <SUZ>
A;Cross-references: EMBL:D50339; NID:g100905; PIDN:BAA08874.1; PID:g1438078
A;Experimental source: adult; thorax muscle
C;Genetics:
A;Genome: mitochondrion
A;Note: ND5
C;Superfamily: NADH dehydrogenase (ubiquinone) chain 5
C;Keywords: membrane-associated complex; mitochondrion; NAD; oxidative phosphorylat
                                                                                                                                NADH2 dehydrogenase (ubiquinone) (EC 1.6.5.3) chain 5 - Acoptolabrus gehinii C;Species: mitochondrion Acoptolabrus gehinii ssp. radiatocostatus C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 03-Jun-2002 C;Accession: T13831
R;Su, Z.H.; Tominaga, O.; Okamoto, M.; Osawa, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NADH2 dehydrogenase (ubiquinone) (EC 1.6.5.3) chain 5 - Acoptolabrus gehini C;Speciles: mitochondrion Acoptolabrus gehinii C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 03-Jun-2002 C;Accession: T13830 R;Su, Z.H.; Tominaga, O.; Okamoto, M.; Osawa, S.
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Best Local :
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ries: mitochondrion Acoptolabrus gehinii
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Pred. No. 40;
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Pred. No.
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5. 40;
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                                                                                                                                     A; Genome: mitochondrion
                                                                                  Superfamily: NADH c
Keywords: membrane-
        Query Match
Best Local
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R;Su, Z.H.; Ohama, T.; Okada, T.S.; Nakamura, K.; Ishikawa, R.; Osawa, S. J. Mol. Evol. 42, 124-129, 1996
A;Title: Phylogenetic relationships and evolution of the Japanese Carabinae A;Reference number: Z17787; MUID:97077297; PMID:8919864
                                                                                                                                                                                                 NADH2 dehydrogenase (ubiquinone) (EC 1.6.5.3) chain 5 - Asthenocarabus opaculus C;Species: mitochondrion Asthenocarabus opaculus C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 03-Jun-2002 C;Accession: T13833
                                                                                                                                                                                                                                                                                    RESULT
T13833
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C; Superfamily: NADH dehydrogenase (ubiquinone) chain 5
C; Keywords: membrane-associated complex; mitochondrion;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
A; Residues: 1-355 <IMU>
A; Cross-references: EMB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R; Imura, Y.; Zhou, H.Z.; Okamoto, M.; Su, Z.H.; Osawa, submitted to the EMBL Data Library, January 1998 A; Description: Phylogenetic relationships of some Chin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NADH2 dehydrogenase (ubiquinone) (EC 1.6.5.3) chain 5 - Aristocarabus viridifossulatu C;Species: mitochondrion Aristocarabus viridifossulatus C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 03-Jun-2002 C;Accession: T11601
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C;Superfamily: NADH dehydrogenase (ubiquinone) chain 5
C;Keywords: membrane-associated complex; mitochondrion; NAD; oxidative phosphorylatic
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A; Residues: 1-355 <SUZ>
A; Cross-references: EMBL:D50429; PIDN:BAA08925.1
A; Experimental source: adult; thorax muscle
C; Genetics:
A; Cross-references: EME
A; Experimental source:
                                     A; Molecule type: DNA
A; Residues: 1-355 <SUZ>
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A-Accession: T11601
                                                                           A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                A; Reference number: A; Accession: T13833
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EMBL:D50340; NID:g1000901; PIDN:BAA08875.1; se: adult; thorax muscle
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ate Baoxing-Sichuan;
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Similarity

3.7%; 100.0%;

Score 7; Pred. No.

DB 2;

Length

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phosphorylatio

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NADH dehydrogenase (ubiquinone) chain 5 brane-associated complex; mitochondrion;

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T12029

NADH2 dehydrogenase (ubiquinone) (EC 1.6.5
C;Species: mitochondrion Carabus concolor
C;Date: 05-Nov-1999 #sequence_revision 05
C;Accession: T12029
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                                                                                                                                                                                                                                                                         C; Superfamil
C; Keywords:
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C;Accession: T13861
                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 1-355 <SUZ>
A; Cross-references: EMBl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R;Su, Z.H.; Ohama, T.; Okada, T
J. Mol. Evol. 42, 124-129, 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: EMBL:D50343; NID:g1000915; PIDN:BAA08878.1; A;Experimental source: adult; thorax muscle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       J. Mol. Evol. 42, 124-129, 1996
A;Title: Phylogenetic relationships and evolution of the Japanese Carabinae A;Reference number: Z17787; MUID:97077297; PMID:8919864
A;Accession: T13861
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C; Species:
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                                                                                       RESULT 33
                                                                                                                                                                                                                                                                                                          A; Genome: mitochondrion
                                                                                                                                                                                                                                                                                                                                                                                                                         A; Accession:
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                                                                                                                                                                                                                                                                                                                                         A; Experimental source: adult;
                                                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary; translated from GB/EMBL/DDBJ
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cies: mitochondrion Campalita chinense
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100.0%;
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Pred. No.
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Mismatches
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                      #text_change 03-Jun-2002
                                                                                                                                                                                                                                     Length 355;
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C; Superfamil
C; Keywords:
                                                                                                   A;Title: Reorganization of A;Reference number: Z17381 A;Accession: T12028
                                                                                                                                                                                                                                                        RESULT
T12028
                                                      A; Molecule type: DNA
A; Residues: 1-355 <II
                                                                                                                                                     R; Imura, Y.; Su, Z.H.; Kim, C.G.; Elytra 26, 223-248, 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R; Imura, Y.; Su, Z.H.; K: Elytra 26, 223-248, 1998
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A; Residues: 1-355 <II
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Elytra 26,
                      A; Experimental source: isolate Champorcer Italy No1;
                                     A;Cross-references: EMBL:AB017455; PIDN:BAA33171.1
                                                                                   A; Status: preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Genome: mitochondrion
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A; Residues: 1-355 <IMU>
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6, 223-248, 1998
                                                      1-355 <IMU>
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                                                                                                                                       the
                                                                                                                                       Oreocarabus complex (Coleoptera,
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NADH2 dehydrogenase (ubiquinone) (EC 1.6.5.3) chair C; Species: mitochondrion Carabus cribratus C; Date: 05-Nov-1999 #sequence_revision 05-Nov-1999
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                            C; Date: 05-Nov-1999 #sequence_revision
                                           NADH2 dehydrogenase (ubiquinone) (EC 1.6.5.3 C; Species: mitochondrion Carabus fairmairei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: EMBL:AB017458; PIDN:BAA33174.1
A;Experimental source: isolate Furka-Pass Swiss; a
                                                                                                                                                                                                                                                                                                                                                                                                    A; Status: preliminary; translated
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                                                                                                                                                                                                                                                                                                                                         460; PIDN:BAA33176.1
Artvin Turkey; adult;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Oreocarabus
                                                                                                                                                                                                                                                               complex; mitochondrion;
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                                                              (EC 1.6.5.3) chain 5 - Carabus
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Osawa,
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GB/EMBL/DDB

Carabidae) based

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adult;

thorax muscle

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A; Note: ND5
C; Superfamily: P
C; Keywords: meml
           A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-355 < IMU>
A; Cross - references: EMBL:AB017463; PIDN:BAA33179.1
A; Experimental source: isolate Innsbruck Austria; adult; C:Genetics:
A; Genome: mitochondrion
A; Mote: ND5
C; Superfamily: NADH dehydrogenase (ubiquinone) chain 5
C; Reywords: membrane-associated complex; mitochondrion; N
                                                                                                                                                                                               NADH2 dehydrogenase (ubiquinone) (EC 1.6.5.3) chain C;Species: mitochondrion Carabus hortensis C;Date: 05-Nov-1999 #sequence_revision 05-Nov-1999 #C;Accession: T12034 R;Imura, Y.; Su, Z.H.; Kim, C.G.; Osawa, S. Elytra 26, 223-248, 1998 A;Title: Reorganization of the Oreocarabus complex (A,Reference number: 217381 A;Accession: T12034
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Elytra 26,
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A; Residues: 1-355 < INU>
A; Cross-references: EMBL: AB017449; PIDN: BAA33165.1
A; Cross-references: isolate Colle di Bellino Italy
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A;Cross-references: EMBL:AB017450;
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A; Note: ND5
C; Superfamily: NADH deh
C; Keywords: membrane-as
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6, 223-248, 1998
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membrane-associated complex; mitochondrion; NAD; oxidative phosphorylation;
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b; Pred. No. 40;
0; Mismatches
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le di Bellino Italy No2; adult; thorax muscle
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A; Note: ND5
C; Superfamily: |
C; Keywords: meml
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A;Title: Reorganization of the Oreocarabus complex (Coleoptera, A;Reference number: 217381
A;Accession: T12114
A;Status: preliminary; translated from GB/EMBL/DDBJ
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C; Superfamily: NADH dehydrogenase (ubiquinone) chain 5
C; Keywords: membrane-associated complex; mitochondrion;
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R; Imura, Y; Su, Z.H.; Kim,
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T12114
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A;Molecule type: DNA
A;Residues: 1-355 <IMU>
A;Cross-references: EMBL:AB017476;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: EMBL:AB017478; PIDN:BAA33194.1 A;Experimental source: isolate Champorcer Italy; adult; C;Genetics:
                                                                                                                                                                                                                                                                                 A; Title: Reorganization of A; Reference number: Z17381
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A; Residues: 1-355 < IMU>
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e-associated complex; mitochondrion;
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100.0%; Pred. No.
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A; Note: ND5
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C; Keywords:
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                                                                                                    NADH2 dehydrogenase (ubiquinone) (EC 1.6.5.3) chain 5 - Carabus C;Speciles: mitochondrion Carabus porrecticollis kansaiensis C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change C;Accession: T12119
R;Kim, C.G.; Su, Z.H.; Osawa, S.
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T12119
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C; Keywords:
                                  submitted to the EMBL Data Library, Januar A; Description: Origin and diversification A; Reference number: 217426 A; Accession: T12119
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A;Genome: mitochondrion
A;Status: preliminary;
A;Molecule type: DNA
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A;Experimental source: isolate Gumushane Turkey; adult;
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C; Keywords:
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A; Residues: 1-355 < IMU>
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A; Cross-references: EMB
A; Experimental source:
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                                                   ;Superfamily: NADH dehydrogenase;Keywords: membrane-associated cc
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NADH2 dehydrogenase (ubiquinone) (EC 1.6.5.3) chair C;Species: mitochondrion Carabus pusio C;Date: 05-Nov-1999 #sequence_revision 05-Nov-1999 C;Accession: T12112
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                                                     ;Superfamily: NADH dehydrogenase (ubiquinone) chain 5;Keywords: membrane-associated complex; mitochondrion;
ilarity 100.0%;
Conservative
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NADIS dehydrogenase (ubiquinone) (EC 1.6.5.3) chain 5 - Carabus putzeysianus mitochondri C;Species: mitochondrion Carabus putzeysianus raynaudianus C;Date: 05-Nov-1999 #sequence_revision 05-Nov-1999 #text_change 03-Jun-2002 C;Accession: T12154
E;Thura, Y; Su, Z.H.; Kim, C.G.; Osawa, S.
Elytra 26, 223-248, 1998
A;Title: Reorganization of the Oreocarabus complex (Coleoptera, Carabidae) based on endc A;Reference number: Z17381
A;Scatus: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-355 <IMU>
A;Experimental source: isolate Laghi di Lollalunga Italy; adult; thorax muscle C;Genetics:
A;Genome: mitochondrion
A;Note: ND5
C;Superfamily: NADH dehydrogenase (ubiquinone) chain 5
C;Superfamily: NADH dehydrogenase (ubiquinone) chain 5
C;Keywords: membrane-associated complex; mitochondrion; NAD; oxidative phosphorylation;
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